FIG. 1

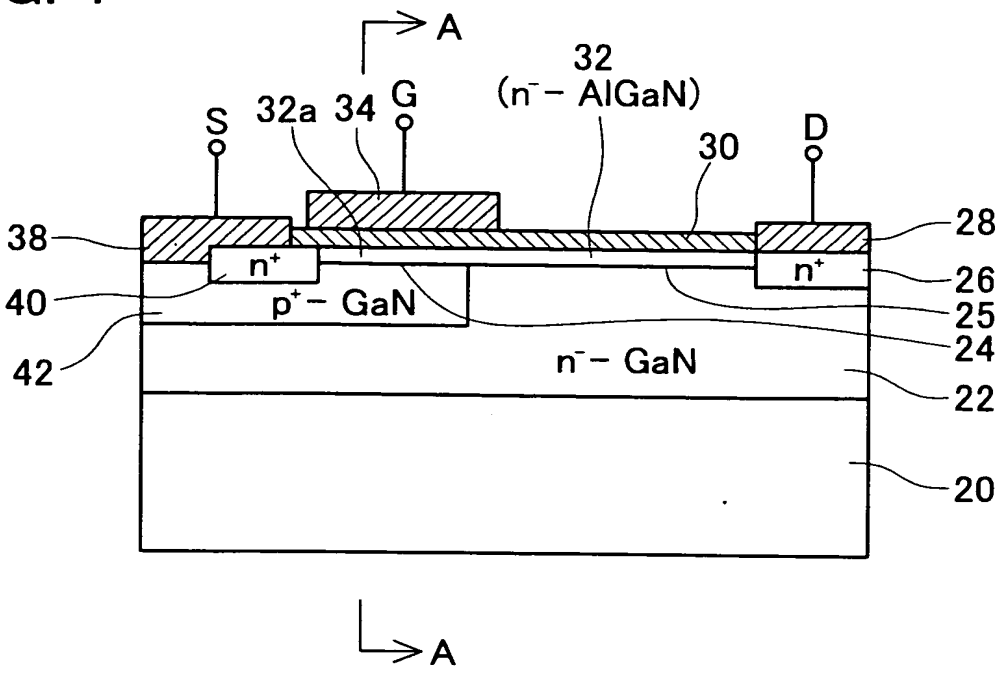

A
32
(n⁻ – AlGaN)
S
32a
34
G
30
D
38
28
n⁺
n⁺
26
40
p⁺ – GaN
25
24
42
n⁻ – GaN
22
20
A

FIG. 2

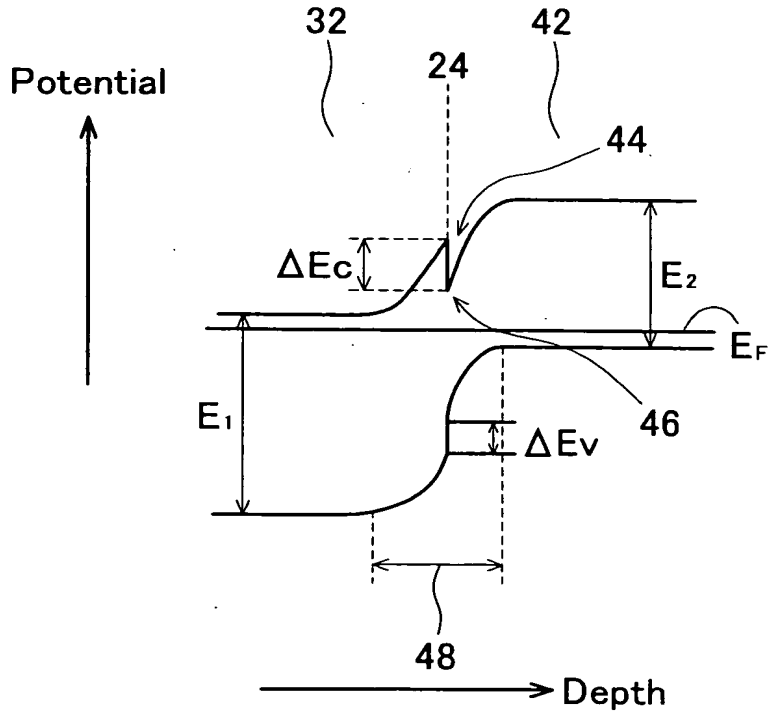

Potential
32
24
42
44
ΔEc
E₂
E_F
E₁
46
ΔEv
48
Depth

FIG. 3

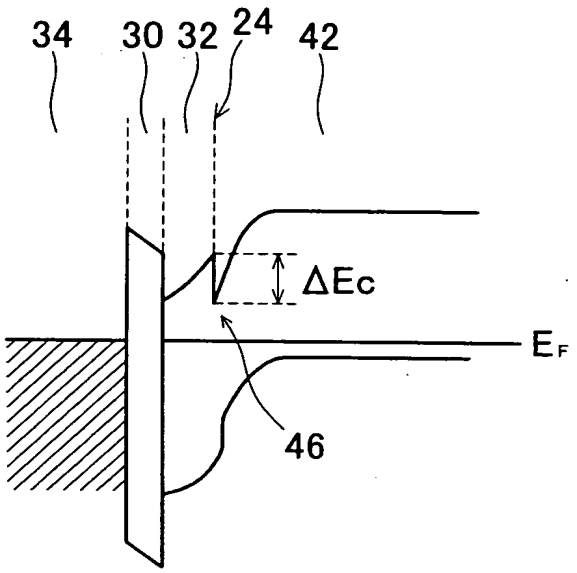


FIG. 4

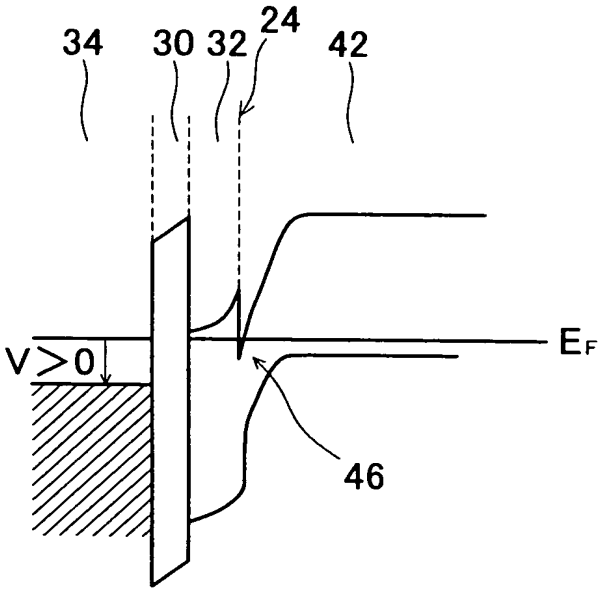


FIG. 5

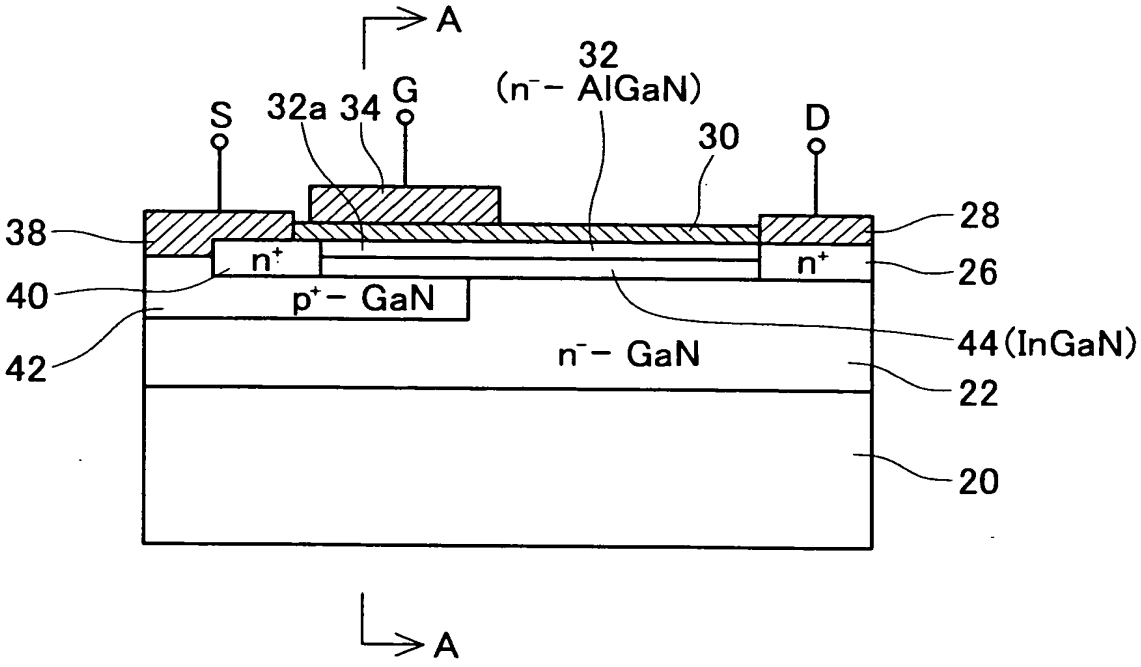

A
32
(n⁻– AlGaN)
S
32a
34
G
30
D
38
28
n⁺
n⁺
26
40
p⁺– GaN
44 (InGaN)
42
n⁻– GaN
22
20
A

FIG. 6

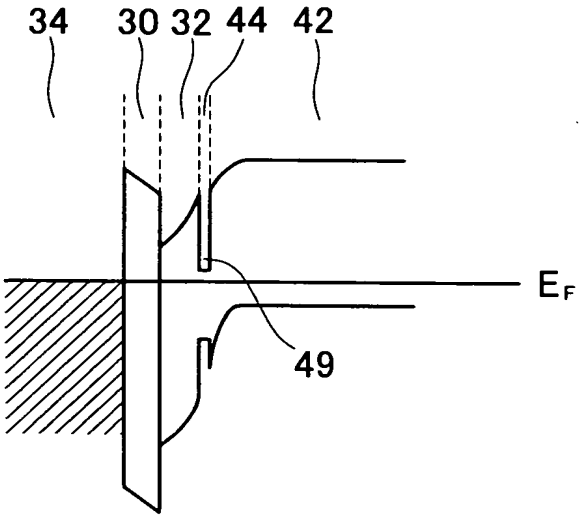

34
30
32
44
42
E_F
49

FIG. 7

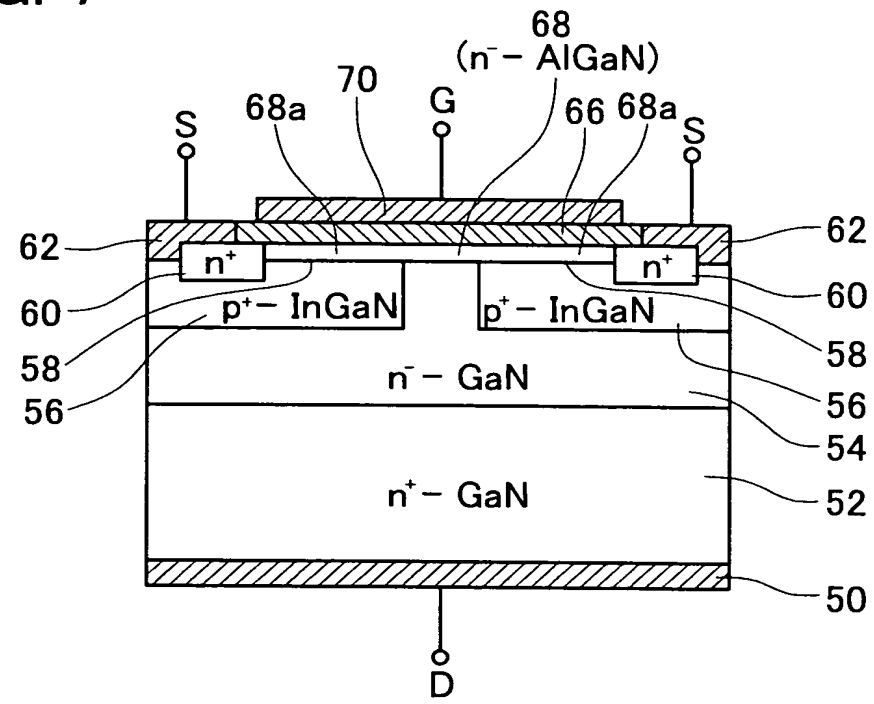

68
(n⁻ – AlGaN)
70
68a
G
66
68a
S
S
62
62
n⁺
n⁺
60
60
p⁺ – InGaN
p⁺ – InGaN
58
58
56
56
n⁻ – GaN
54
n⁺ – GaN
52
50
D

FIG. 8

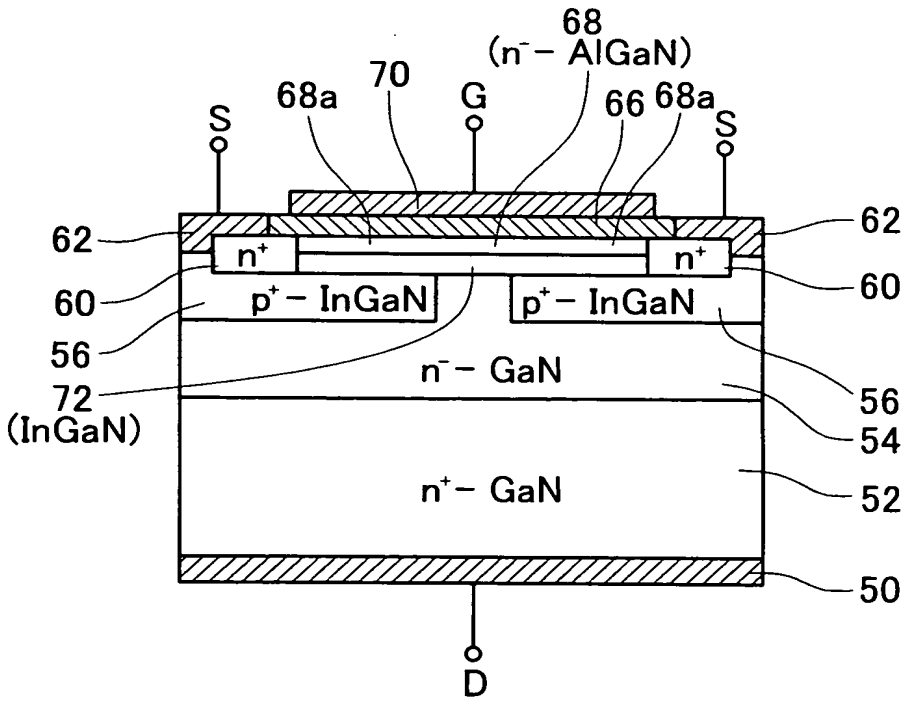

68
(n⁻ – AlGaN)
70
68a
G
66
68a
S
S
62
62
n⁺
n⁺
60
60
p⁺ – InGaN
p⁺ – InGaN
56
56
72
(InGaN)
n⁻ – GaN
54
n⁺ – GaN
52
50
D

FIG. 9

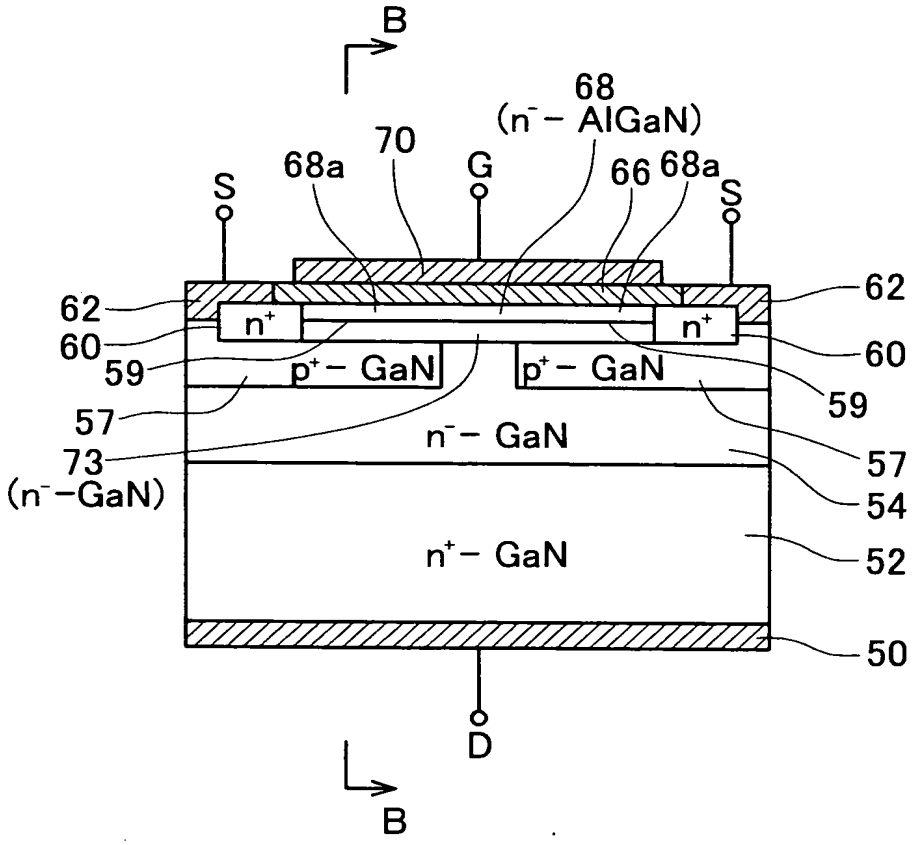
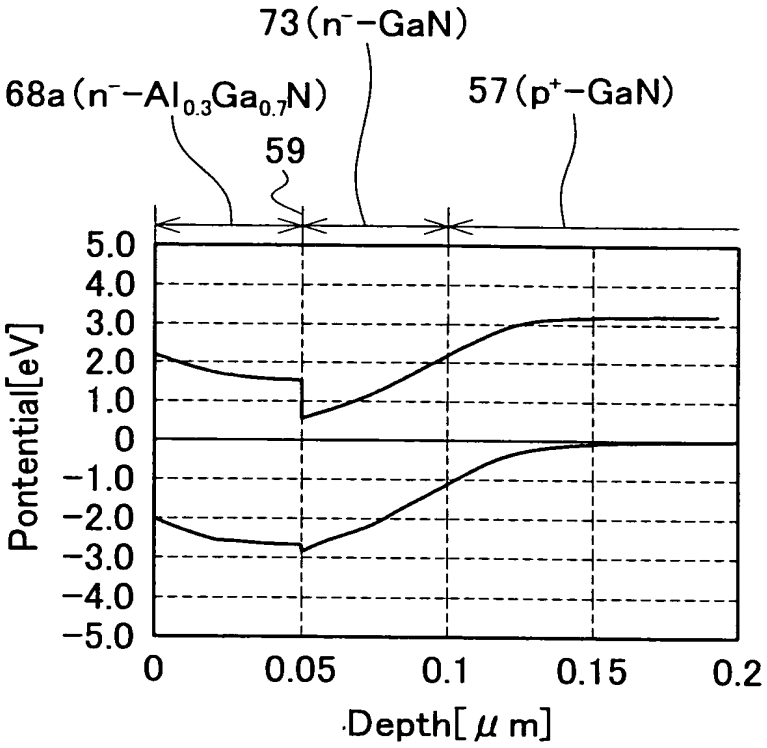

B
68
(n⁻ – AlGaN)
70
68a
G
66
68a
S
S
62
62
n⁺
n⁺
60
60
59
p⁺ – GaN
p⁺ – GaN
59
57
57
73
n⁻ – GaN
(n⁻–GaN)
54
n⁺ – GaN
52
50
D
B

FIG. 10

(a)


73 (n⁻−GaN)
68a (n⁻−Al0.3Ga0.7N)
59
57 (p⁺−GaN)
Pontential[eV]
5.0
4.0
3.0
2.0
1.0
0
−1.0
−2.0
−3.0
−4.0
−5.0
0
0.05
0.1
0.15
0.2
Depth[μm]

(b)

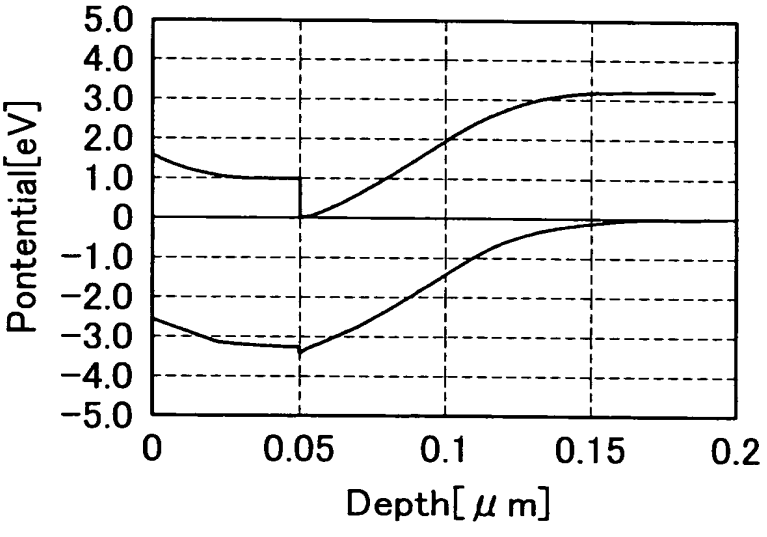
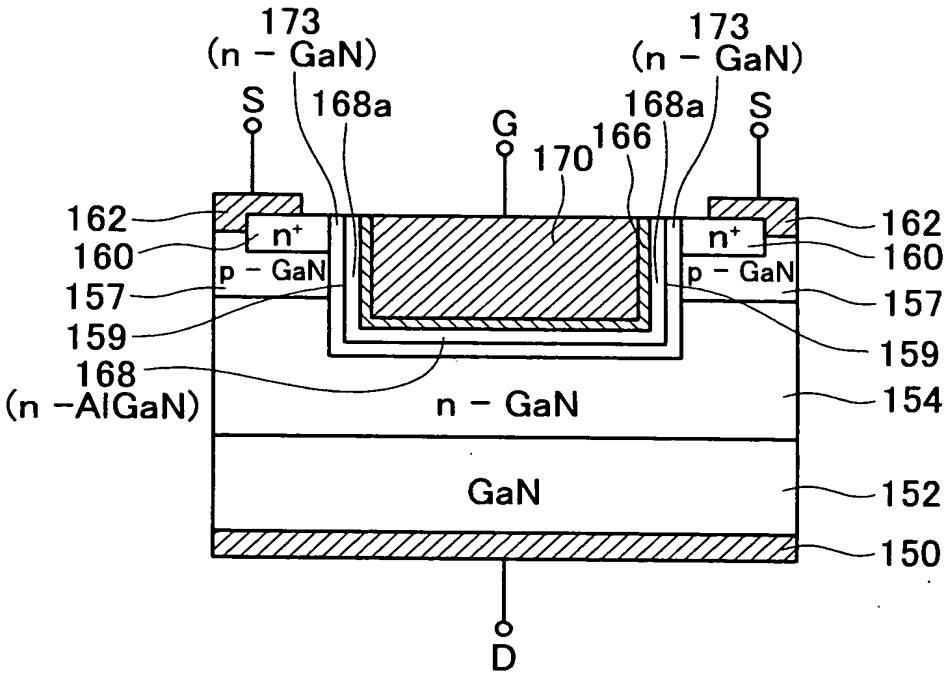

Pontential[eV]
5.0
4.0
3.0
2.0
1.0
0
−1.0
−2.0
−3.0
−4.0
−5.0
0
0.05
0.1
0.15
0.2
Depth[μm]

FIG. 11


173
(n − GaN)
173
(n − GaN)
S
168a
G
168a
S
170
166
162
n+
n+
162
160
160
p − GaN
p − GaN
157
157
159
159
168
(n −AlGaN)
n − GaN
154
GaN
152
150
D